

ABSTRACT OF THE DISCLOSURE

An aspect of the present invention includes a first conductive type semiconductor region formed in a semiconductor substrate, a gate electrode formed on the first conductive type semiconductor region, a channel region formed immediately below the gate electrode in the first conductive type semiconductor region, and a second conductive type first diffusion layers constituting source/drain regions formed at opposite sides of the channel region in the first conductive type semiconductor region, the gate electrode being formed of polycrystalline silicon-germanium, in which the germanium concentration of at least one of the source side and the drain side is higher than that of the central portion.